

SYSTEMS, APPARATUS AND METHODS FOR BONDING AND/OR SEALING
ELECTROCHEMICAL CELLS ELEMENTS AND ASSEMBLIES

ABSTRACT OF THE DISCLOSURE

Apparatus, systems, and methods for bonding one element of an electrochemical cell or cell stack to another wherein a sealing groove with a complex cross-sectional shape receives and retains a bead of adhesive prior to being assembled. The complex cross-sectional shape has a raised portion sized to receive and retain the bead of adhesive, and at least one depressed portion to receive adhesive displaced from the raised portion during assembly. Embodiments of the invention incorporate raised portions with straight, beveled, curved, and rough surfaces to increase the strength of the bond between the respective elements.

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